



VSIM 2.0 Abridged Users Guide

VSIM facilitates the real-time exploration and educational use of highly detailed, academically generated three-dimensional computer models. The VSIM software and the companion VSIM Repository and Archive were funded by the National Endowment for the Humanities (HD-50958-10 and

HK-50164-14) and UCLA's Office of Information Technology/Institute for Digital Research and Education. The online VSIM Repository and Archive (vsim.library.ucla.edu) was created in partnership with the UCLA Digital Library Program for the dissemination of 3D content across grade levels and humanities disciplines.

The following is an abridged guide for using VSIM 2.0 to successfully interact with 3D models as part of your research or classroom presentations. It covers VSIM's three major components: general navigation tools and settings, the narrative feature, and the embedded resources feature.

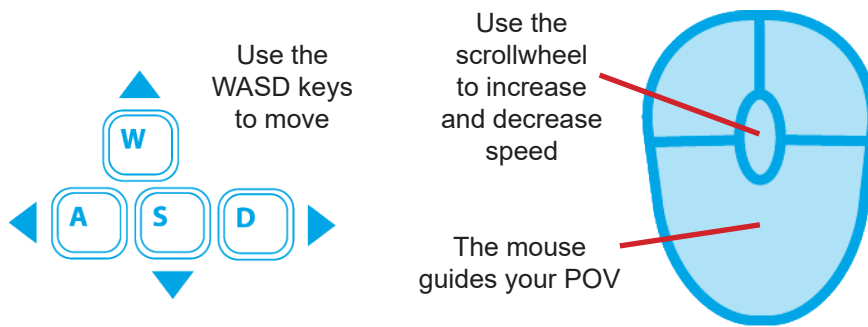


At first launch, the VSIM interface appears deceptively simple (upper left image), but it facilitates sophisticated interactions with academically generated real-time models. Above, the Street of Cairo installation from UCLA's reconstruction of Chicago's World's Columbian Exposition of 1893 is shown in a screenshot captured during a flight session. The Narrative Bar across the top of the simulation window shows thumbnails from a linear presentation describing the construction of the concession, and the Embedded Resources Bar across the bottom shows the material available for interrogation by the user. At right, images from a private collection and the Ryerson and Burnham Library at the Art Institute of Chicago that have been embedded in the model to enrich the learning experience.

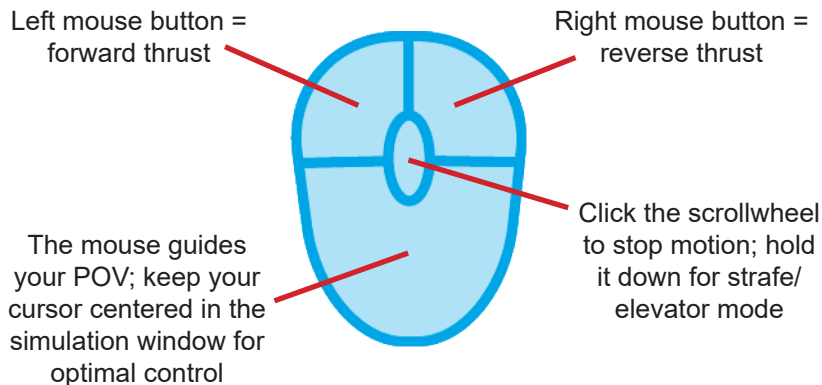
Before all else, learn the NAVIGATION controls!

VSim's navigation tools facilitate real-time interaction with 3D content in first person (WASD), flight simulation, or Google Earth-style object rotation mode. In all modes, the spacebar toggles between **freeze** (so that you can interact with the narratives and embedded resources) and **unfreeze** (so that you can navigate through the environment). In both first person and flight mode, the 'G' key toggles ground mode on and off to tether you to the ground at pedestrian height.

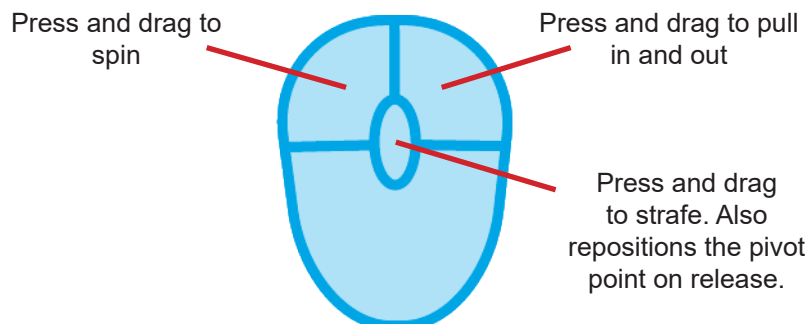
Press '1' for first person (WASD) mode



Press '2' for flight mode



Press '3' for object mode



'F1' Displays Hotkeys

- 1 First person (WASD) mode
 - 2 Flight mode
 - 3 Object mode
- Spacebar = Freeze/Unfreeze (Freeze to engage with the narratives and resources, Unfreeze to navigate through the environment)
- G Ground mode on/off
- C Collision on/off
- = Increase speed
- Decrease speed
- R Reset viewing position to home
- F1 and H = Help and hotkeys menu
- T Time slider controls
- E Switch menu
- L Lighting on/off
- X Texturing on/off
- Y Simulation statistics
- ; Draw mode: fill/wireframe/point-cloud
- P Play/pause narrative
- Esc = Stop playing narrative
- Left Arrow = Previous node
- Right Arrow = Next node
- M Model outliner on/off
- J History window on/off

REMEMBER ...

- SPACEBAR** Freeze/Unfreeze
- G** Ground on/off
- C** Collision on/off
- F1** Help/Hotkeys

The Narrative Feature

The narrative feature of VSim was specifically constructed for classroom presentations. A narrative is essentially a linear path through a 3D environment that is constructed of a sequence of nodes. This allows you to use the 3D environment as the basis for a presentation akin to PowerPoint or Prezi, but with nodes in the 3D space instead of 2D slides.

There are three components to the narrative feature: the Narrative Player, the Narrative Editor, and the Node Editor. You can access these three components from the Narrative Bar across the top of the simulation window.

1. The **Narrative Player** is the first level of the narrative feature. A model may come loaded with narratives, or you may build your own (see following pages for basic instructions). If narratives are loaded, you'll see their titles in the boxes. Click the title once to select a narrative, and use the 'Play' button to start the sequence. During playback, the 'P' key toggles between play and pause. Press 'Open' to see the thumbnails of the narrative nodes in the Narrative Editor.
2. The **Narrative Editor** displays the nodes that compose the narrative. Within the Narrative Editor, you can add, delete, and rearrange nodes; and adjust the timing on both the nodes themselves and the transitions between them.
3. The **Node Editor** allows you to add overlay text and images onto a node. Use the four styles provided for consistent visuals, or customize them to match the mood and palette of your model.

The Narrative Bar showing the Narrative Player

The blue highlight identifies the selected narrative

This model includes multiple narratives; if the model you open doesn't include narratives, this region will be empty

The screenshot shows the VSim software interface. At the top is the Narrative Bar with a menu (File, Edit, Navigation, Model, Render, Settings, About) and a series of narrative buttons. The 'Transportation Bldg.' button is highlighted in blue. Below the Narrative Bar is a 3D model of the Transportation Building. An architectural drawing is overlaid on the model, with a red arrow pointing to it from a text box. At the bottom left, there is a 'Flight mode' button. At the bottom right, there is a status bar showing coordinates: 'x: 1206.0, y: -512.6, z: 51.1 | h: 269, p: 2, r: 0'.

An image with a border has been added to the node

A textbox on the node

Engineering

Flight mode

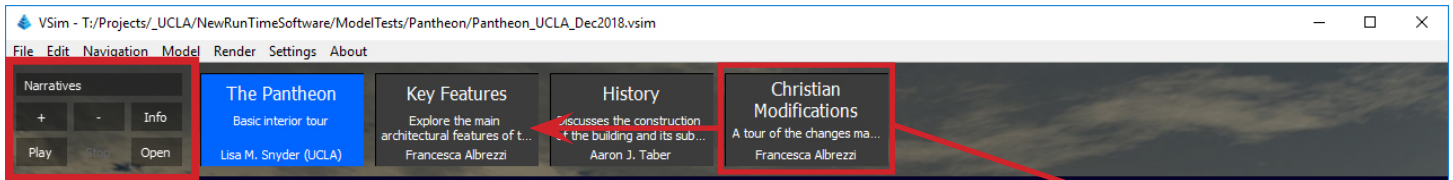
Shows status of program settings and operations

Displays the current position in the model

x: 1206.0, y: -512.6, z: 51.1 | h: 269, p: 2, r: 0

The Narrative Player

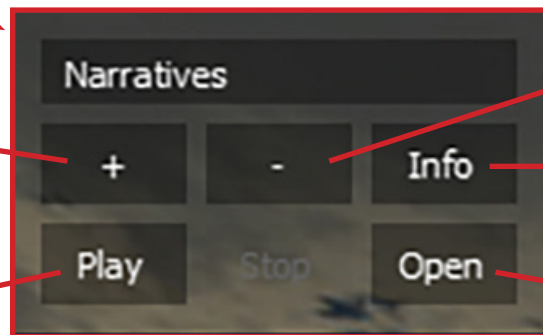
When the Narrative Bar along the top of the simulation window displays titles, the controls govern the Narrative Player. The Narrative Player displays the titles of narratives that are loaded, if any. The example below shows four narratives. You can minimize and scale the Narrative Bar by dragging the bottom edge of the bar up and down.



Press and drag titles to re-order narratives

Begins the narrative creation process; you will be prompted for a title, description, and author

Play/Pause the selected narrative



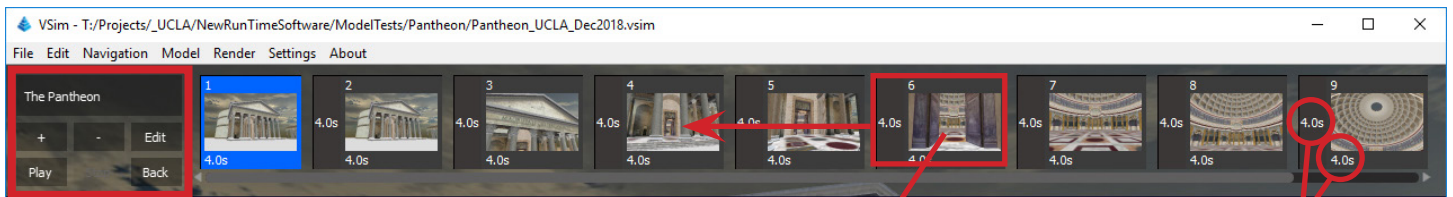
Deletes the selected narrative

Displays details about the selected narrative

Launches the Narrative Editor (see below)

The Narrative Editor

When the Narrative Bar along the top of the simulation window displays thumbnails, the controls govern the Narrative Editor. The Narrative Editor displays the nodes that make up a narrative. A narrative is essentially a linear path through a 3D environment that is constructed of a sequence of nodes. This allows you to use the 3D environment as the basis for a presentation akin to PowerPoint or Prezi, but with nodes in the 3D space instead of 2D slides. You can minimize and scale the Narrative Bar by dragging the bottom edge of the bar up and down.

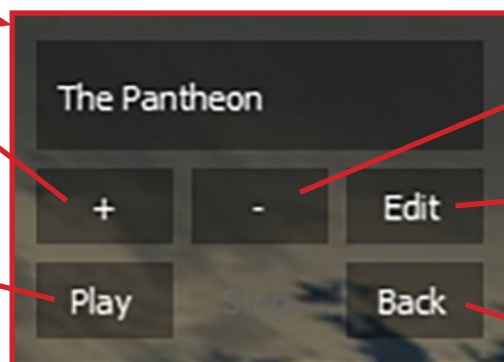


Press and drag to re-order nodes

Double click to adjust timing on nodes and transitions

Adds a new node after the one selected

Play/Pause the selected narrative



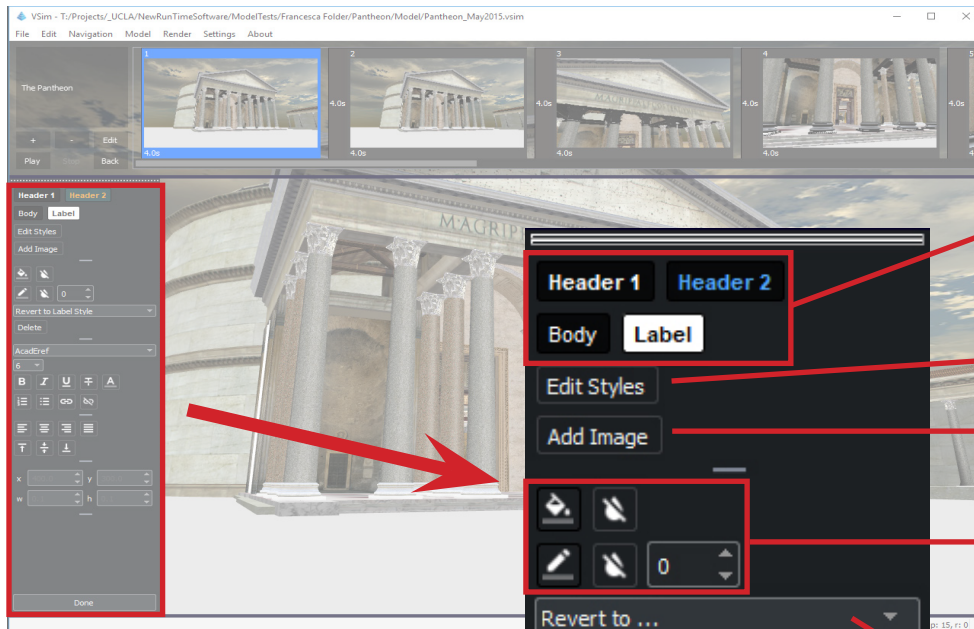
Deletes the selected node

Launches the Node Editor to add text and/or images to the overlay (see next page)

Returns to the Narrative Player

The Node Editor

Selecting a node and pressing 'Edit' from the Narrative Editor launches the Node Editor. The Node Editor allows you to add text and imagery as overlays onto the nodes that will appear during narrative playback. Four font styles are available for you to use and/or customize.



Adds a textbox to the node in one of four styles (Header 1, Header 2, Body, and Label)

Launches the settings dialog box to edit the four active styles

Adds images to the node

Changes the color and opacity of the textbox background and border

Deletes the selected item

Changes selected text to one of the four active styles

Changes the font, size, attributes, and color of the text, and sets or deletes hyperlink settings

Changes the text layout and position within the textbox

Sets the textbox or image size and position

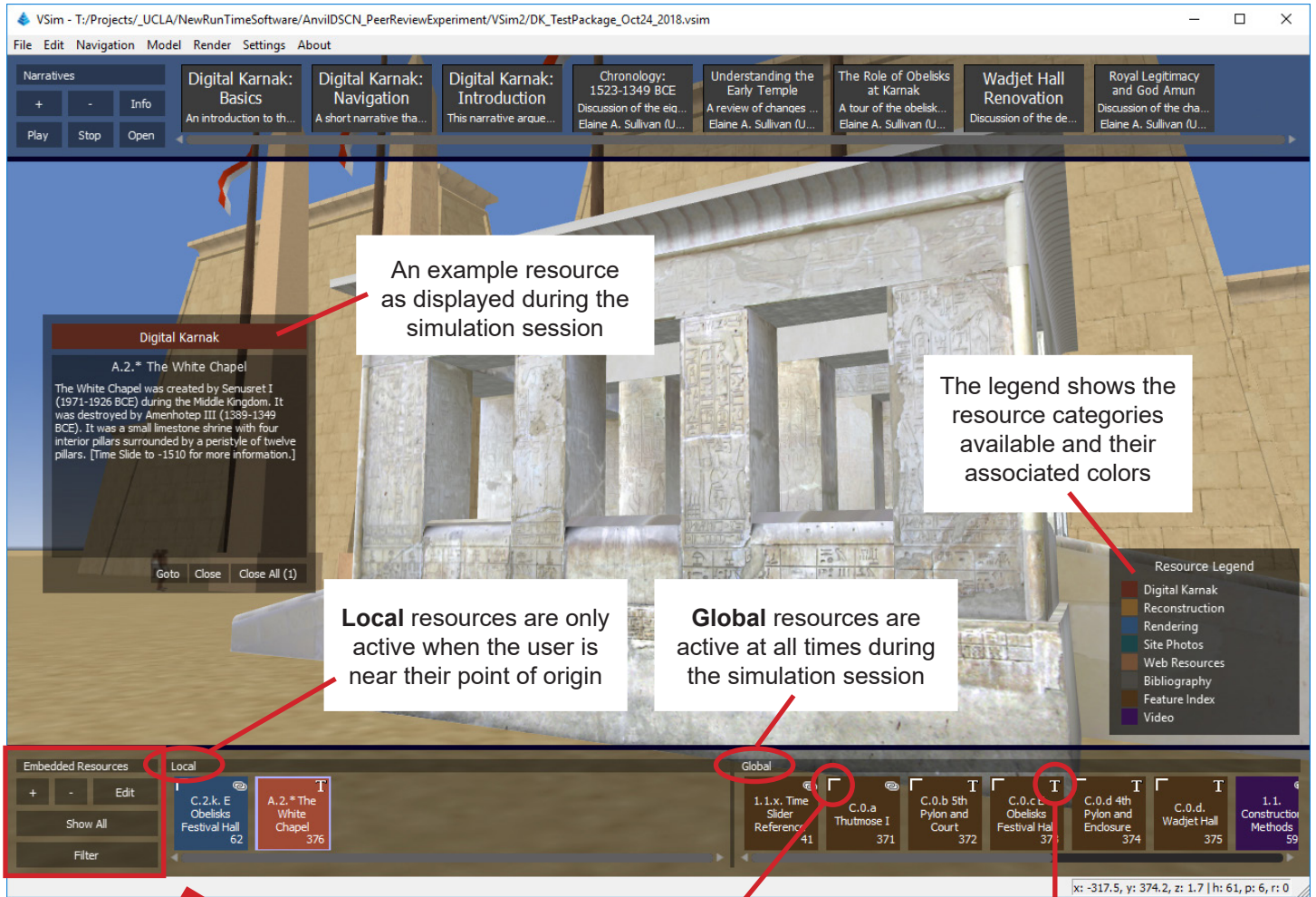
NOTE: When this control panel is visible, only the NODE EDITOR controls are functional

Exits the Node Editor

To save your narrative as a standalone file, click 'File -> Export Narratives ...'
See the full VSIM guide for more information on saving and exporting options.

The Embedded Resources Feature

The bar along the bottom of the simulation window controls the Embedded Resources. The Embedded Resources feature was designed to enable annotation of the 3D environment. Resources can be simple textual annotations, or include links to digital files and web resources. They can be searched and filtered. The default view splits the display of embedded resources according to which are **local** (i.e., spatially aware) and which are **global** (i.e., available to the user at all times). The Embedded Resources Bar can be minimized and scaled by dragging the top edge of the bar up and down.

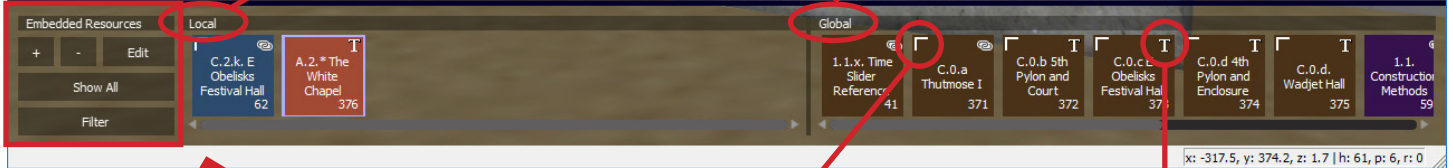


An example resource as displayed during the simulation session

The legend shows the resource categories available and their associated colors

Local resources are only active when the user is near their point of origin

Global resources are active at all times during the simulation session

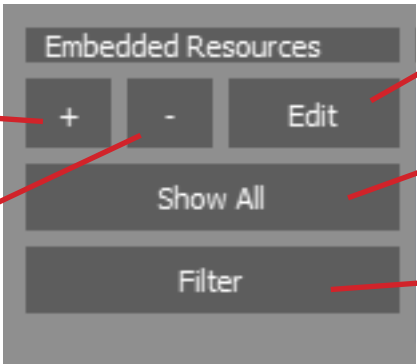


Will re-orient the viewing position when selected

= URL = Text Annotation = File

Adds a new resource and launches the Embedded Resource Editor

Deletes the selected resource(s)



Click to edit the selected resource

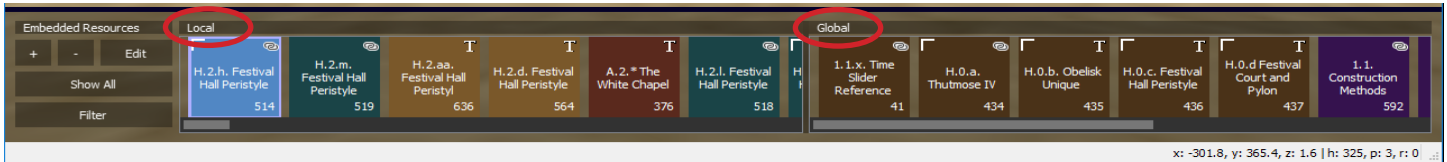
Toggles between 'Show All' resources and 'Show Local/Global'

Filters the resources that are displayed during interaction; also includes search function and legend options

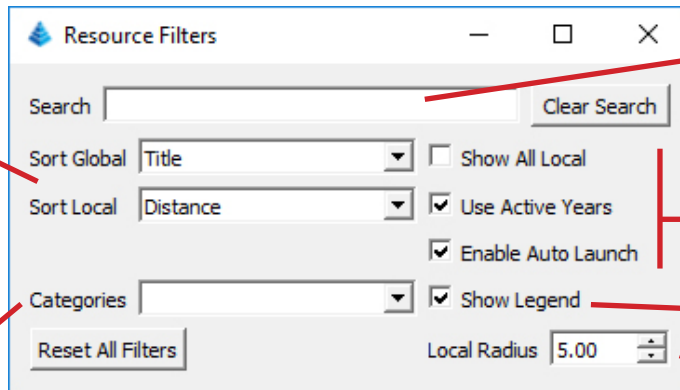
Managing and Filtering Resources

The VSim default view splits the display of resources according to which are **local** (i.e., spatially aware) and which are **global** (i.e., available to the user at all times). Filtering can further control the resources displayed during interaction. Clicking 'Show All' shows all resources in one display window.

Local/Global Embedded Resources Display



Resources can be sorted by title, distance, start year, or creation order



Searches through the resources' title, description, author, and file name fields

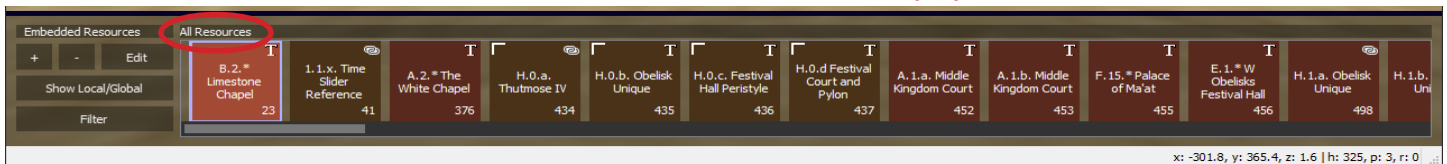
Setting overrides to display all local resources and disable auto launch

Legend on/off

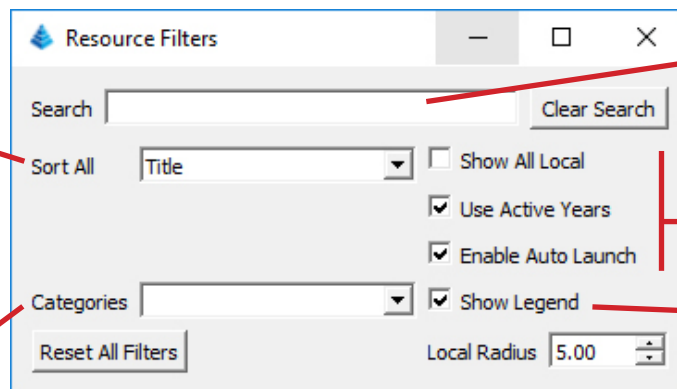
Adjusts the search radius for local resources

Filter by resource categories

'Show All' Embedded Resources Display



Resources can be sorted by title, distance, start year, or creation order



Searches through the resources' title, description, author, and file name fields

Setting overrides to display all local resources and disable auto launch

Legend on/off

Adjusts the search radius for local resources

Filter by resource categories

To save your embedded resources as a standalone file, click 'File -> Export Resources ...'

See the full VSim guide for more information on saving and exporting options.

The Embedded Resource Editor

The screenshot shows the 'Embedded Resource' dialog box with the following fields and controls:

- Type:** Radio buttons for File, Annotation (selected), and URL.
- Choose:** A button to browse for a file.
- Relative:** A checked checkbox.
- Title:** A text field containing 'Untitled'.
- Description:** A large text area.
- Authors/Source:** A text field.
- Use/Licensing:** A dropdown menu set to 'Unspecified'.
- Category:** A dropdown menu set to 'URL' with an 'Add New' button.
- Activation Zone:** Radio buttons for Global and Local (selected).
- Auto Launch:** Radio buttons for Off (selected), On, and Text.
- Radius:** A slider from 0 to 100 with a value of 10.
- Goto on click:** An unchecked checkbox.
- Active Range (Year):** Two spinners set to 0 to 0.
- Buttons:** OK, Set Position, and Cancel.

Annotations and their corresponding text:

- Choose if the resource includes a link to an external file (e.g., an image or pdf):** Points to the File radio button.
- Choose if the resource is only text:** Points to the Annotation radio button.
- Choose if the resource includes a link to an online resource:** Points to the URL radio button.
- If the resource includes a file or web link, either paste the URL or browse for the file location:** Points to the Choose button.
- Select if you want the file path of the resource to be relative to the location of the primary .vsim file (this allows you to package files for distribution with your model):** Points to the Relative checkbox.
- The title field is displayed in the Embedded Resources Bar during all user interaction:** Points to the Title field.
- The description is displayed when the resource launches:** Points to the Description field.
- The author/source field can be used for bibliographic information:** Points to the Authors/Source field.
- All resources must be assigned to a category; choose from the dropdown menu or click 'Add New':** Points to the Category dropdown.
- Choose whether the resource should be considered local or global:** Points to the Activation Zone radio buttons.
- For local resources, sets the size of the activation zone:** Points to the Radius slider.
- If selected, when the user selects this resource, their view will be re-oriented to the saved position of the resource:** Points to the Goto on click checkbox.
- Accepts changes to the resource:** Points to the OK button.
- Resets the location and viewing position for the resource:** Points to the Set Position button.
- Cancels changes to the resource:** Points to the Cancel button.
- Select the most appropriate licensing statement for the content of the resource:** Points to the Use/Licensing dropdown.
- For local resources only: If Off, the user must manually click to launch the resource; if On, the resource will automatically launch when the user enters the activation zone, along with the associated file or web link; if Text, only the text description will automatically display:** Points to the Auto Launch radio buttons.
- If the model includes multiple time periods, this sets the range during which the resource will be active:** Points to the Active Range (Year) spinners.

The VSim Project Team

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The VSim logo was derived from an image entitled 'food pyramid' by Simon Sim from the Noun Project.

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